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MEMORIALS OF THE LIFE

OF

HENRY ATKINSON,

BY ROBERT WHITE.

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Be a philosopher ; but, amidst all your philosophy, be still a man.

HUME.

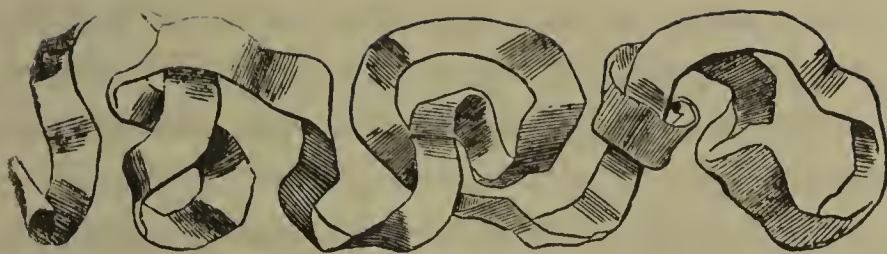
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Henry Atkinson,

&c., &c.

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It is somewhat singular that, within the last half-century, no spot in the united kingdom has been more associated with the early life of a number of our eminent mathematicians than Woodburn in Redesdale. In the first place, Cuthbert Atkinson, father of him who forms the subject of this notice, taught school there—a man who, if he did not especially cultivate science in its loftier branches, was endowed with all the ability to do so ; and whose practical good sense, and philosophical turn of mind were sufficient to procure him an honourable position in any rank of society. Then we have Henry Atkinson himself, who, alternately with his father, taught school also at Woodburn and Bavington, a village lying a few miles south east of the former place. Mr. Edward Riddle, head master of the Mathematical school at the Royal Naval Asylum, Greenwich, and author of the best treatise, we have on navigation, spent at Woodburn the greater portion of his early days. Again, we have John Riddle, born at Woodburn, a youth of remarkable promise as a Mathematician, but who was cut off, almost before he put his sickle into the harvest of fame which lay before him. After him, Thomas Burn deserves notice, who first saw the light at Woodburn, and who likewise gained a scientific name, but died early, beloved by his friends, and who, to the writer of these remarks, stood in point of affection equal to that of a brother. Then Mr. William Rutherford, of the Royal



Military Academy, Woolwich, may be mentioned, who taught school at Woodburn, and whose fame as a skilful analyst has gone forth over the world. Lastly we may close the list with Mr. Stephen Fenwick, also of the Royal Military Academy, Woolwich, born at Woodburn, whose ability in science, likewise, renders him an ornament to his profession.

Henry Atkinson, son of Cuthbert Atkinson, already mentioned, was born at Great Bavington in Northumberland on June 28, 1781. About his third year he removed with his father to the Divot Hills, a farm steading near to the former place; and in his sixth year, he again removed with his father to West Harle, where he resided till the period when he began to assist in conducting Bavington School. He was a kind hearted, lively boy, desirous of the company of all classes, and could have enjoyed himself as much, or more in a Gypsy camp than in a palace: indeed, his friends were sometimes afraid that he might be taken away by some of the *Faa Gangs*, of which a number at that period traversed the country. About the eleventh year of his age, during a forenoon, when at school, he was seized with a severe pain in his right knee; and being conveyed home, he lay in bed for several months, not even expected to recover. Gradually, however, his health began to improve; but the limb afterwards continued lame, and very much pain it occasioned him through the future course of his life. When he reached his thirteenth year, his father considering him capable of teaching Bavington School, resigned it to his charge, and opened another at West Woodburn. These two schools were, notwithstanding, superintended by the father and son alternately. Sometimes they changed every seven days, and again each would have remained stationary for two or three weeks. In a short period, Henry became an excellent teacher: he possessed in an eminent degree the faculty of communicating information by the most easy and direct methods; and his lively conduct and agreeable disposition, together with the perfect comprehension he had of all he imparted to his pupils, won their confidence, and made him greatly respected amongst them. He also relished highly the jocund amusements which diversify a country life; and he loved fishing, an art in which he especially excelled, although from the tenor of his mind, we may suppose he cared less about the number and size of trout caught, than the opportunity it afforded him of straying by the wimpling streams, amid the fresh breezes from the hills, and of enjoying Nature in all her purity and loveliness.

About his sixteenth year his father and he quitted the school at Bavington, and opened another at West Belsay, while they continued to change as before, between the latter place and Woodburn. In



1802, Cuthbert Atkinson gave up a small piece of land which he rented at West Harle, retired from Woodburn School, and removed his family to Black Heddon; for besides his wife, and son Henry, he had three daughters, all advancing to womanhood. One of these, Mary by name, now Mrs. Hepple, in union with her brother, commenced to keep school at Stamfordham—she teaching the girls, and Henry superintending the boys. Shortly afterwards Cuthbert Atkinson removed the school from West Belsay to Hetchester Law, and the alternate changes previously made between him and his son, from one place to another, were now discontinued.

When Henry Atkinson removed to Stamfordham, he had made considerable progress in scientific investigation; and being now arrived at maturity, and mixing with good society, he was much esteemed both as a talented man, and one of the most efficient instructors of youth ever known in that neighbourhood. Still persevering in his favourite studies, he remained there upwards of six years; and then, together with his sister removed to the adjoining village of Hawkwell. About six months afterwards, considering that his position in the country afforded slight scope for turning what abilities he possessed to advantage, Henry resigned in favour of his father, who had for some time kept school at Berwick Hill; and he removed to Newcastle, Nov. 14, 1808. In that large town he speedily attained the highest rank in his profession. He was a most able teacher; and although his numerous engagements often left him very brief intervals of leisure, still his scientific skill was of great service in enabling him to pursue the various branches of knowledge with which he was usually engaged. There is no doubt that this change was a fortunate event in his life. In the country, he had no acquaintances, with whom the love and pursuit of knowledge formed a prevailing passion, and few books by which he could acquire the discipline necessary to a pioneer in the higher departments of science. In Newcastle, as he often observed, many opportunities of being more generally known were presented to him: he met well-informed men, and the Literary Society furnished him with volumes of the utmost consequence to him in prosecuting his studies. No other teacher in the town had at that time made much progress in mathematical learning, which he was quick enough to perceive, and act upon with honour to himself. He resolved, as time permitted, to write papers on scientific subjects, and read the same at the meetings of the Literary and Philosophical Society, of which he was elected a member in June, 1809.

The first paper he introduced to the notice of the members of that Institution was entitled “A new method of extracting the Roots of Equations of the higher orders.” The discovery was first

made by himself in 1801, and the essay was drawn up and sent to the Senior Secretary, who read it at the monthly meeting in August, 1809. This paper many years afterwards formed the basis on which its author rested his claim of priority in discovering the mode of handling equations, which has been pursued by Holdred Nicholson, and Horner, with such marked success. On the following year, he prepared and read an elaborate essay, "On the eclipses of Jupiter's satellites, and on the mode of determining the longitude by these means," which, indicating the attention he had paid to Astronomy, elicited the praise and procured him the unanimous thanks of the Society. In 1811 he produced and read two papers; the one containing, "An ingenious proof of two curious properties of square numbers," which Dr. Hutton spoke of in terms of high approbation, and the other "Demonstrating that no sensible error can arise in the theory of falling Bodies, from assuming Gravity as an uniformly accelerating Force." About the early part of 1813, the Society was further gratified by listening to an elaborate paper from his pen, "On the Comet of 1811," and he produced, at the same time, a model, shewing its path through the heavens. Towards the close of that year, he also drew up and read, "An essay on Proportion." About this time, having perused, in the Manchester Memoirs, a paper by P. Ewart, Esq. "On Forces," he wrote another "On the difference between the followers of Newton and Leibnitz concerning the measure of Forces," which he read to the Society in 1814. In the following year, he produced an essay, "On the possibility, and if possible on the consequences of the Lunar origin of Meteoric Stones." About this period, he embraced a wider field in the course of his enquiries; and, considering Moral Philosophy to be of great importance in promoting the well being of mankind, he read, in 1816, an essay, "On the nature and connexion of Cause and Effect." His worth as a most valuable member of the Society would appear to have been at that time so well known and appreciated that he was, at the following anniversary, chosen one of the Committee.

Metaphysical science now occupied much of his attention; and in 1818, he brought forward an "Essay on Truth"—an admirable paper, which was highly commended by Dr. Gillies, author of the History of Greece, and formed the chief topic of conversation at two meetings of the Society. In 1819, he produced before that body, "A new mode of investigating Equations which obtain among the Times, Distances and Anomalies of Comets moving around the Sun, as their centre of attraction, in parabolic orbits." At this period, Smith's Wealth of Nations, and other treatises on Political Economy formed to him a subject of research, and in the following



year he read "An Essay on the effects produced on the different classes of society by an increase or decrease of the price of Corn". Much of his time, remaining from the hours in which he taught his own school, was now occupied in private tuition; besides, he attended one or two boarding schools in the town for the instruction of young ladies,—all of which retarded him in following out the bent of his mind in scientific and other pursuits. However, in 1824 he produced a paper, "On the utility and probable accuracy of the method of determining the Sun's parallax by observations on the planet Mars, near his opposition;" and shortly afterwards he read another, "On the true principles of calculating the Refractive powers of the atmosphere." In 1826, he drew up and read a lengthy paper, "On Suspension Bridges, and on the possibility of the proposed Bridge between North and South Shields," which occupied two meetings of the society. Of this essay a portion related to some interesting experiments on the strength and elasticity of Iron, which he read to the Scientific and Mechanical Institution, being himself one of the members of its committee. During the spring of the following year he projected, arranged and delivered in the Room of the Literary and Philosophical Society, a course of nine lectures on Astronomy, which he illustrated with a great variety of familiar diagrams, to a numerous and attentive assembly. This course he afterwards compressed into two or three lectures, which he read to the members of the Scientific and Mechanical Institution. These were the last public efforts he was enabled to make in the cause and promotion of Science, his health being at this time in a declining state.

Of the above papers or essays, the one he produced in 1824, "On the utility and probable accuracy of the method of determining the Sun's parallax by observations on the planet Mars, near his opposition," was afterwards presented to the Astronomical Society of London, where it was read on March, 12. of that year, and was printed in the transactions of the Society, Vol. II page 27. The other paper "On the true principles of calculating the Refractive Powers of the Atmosphere," he revised, and greatly enlarged, entitling it "An Essay on Astronomical and other Refraction, with a connected enquiry into the Law of Temperature in different Latitudes, and at different Altitudes." This he also presented to the Astronomical Society, and it was read to the members on January 14, April, 8, and May 13, 1825. It may be found in the Transactions of the Society, Vol. II. page 137; and it called forth, on its appearance, some very high encomiums from several of the most learned men in Europe.

Still the gentlemen who formed the Literary and Philosophical Society of Newcastle, and those of whom the Astronomical Society

of London was composed, were few in number to appreciate the extent and variety of Henry Atkinson's acquirements. He commanded a more popular field of distinction in the Mathematical department of the Diaries—those invaluable repositories, which for a century have shone as beacon-lights to encourage, direct, and reward genius. He obtained the prize in the Gentlemen's Diary for 1819, and his contributions to the work appear chiefly in that, and the two following years. In the Ladies' Diary he laboured much more assiduously: indeed, whoever looks into it from 1810 through each successive year to 1823, will observe that during the said period, he answered nearly the whole of the questions proposed in that Miscellany. Clearness and elegance of arrangement characterize his solutions; and he very deservedly received prizes for the years 1811, 1816 and 1823. From the correspondence which arose out of his connection with the Ladies' Diary I am happy in being able to give the following extract of a letter from Dr. Hutton. The handwriting is feeble and much shaken; but the punctuation is correct, and the substance shows on what intimate terms he, to whom it was addressed, stood with the learned men of his day.

“Bedford Row. Feby. 1, 1817. Dear Sir, I have to thank you for your letter just received with the enclosure; both came safe to hand.—There are no acknowledgments due for the preference given in the Diary to your solutions, as their own merits sufficiently secure and demand the best place and encouragement; and my only regret is that the necessity of sparing a little room for other inferior contributors prevents me reluctantly from suppressing so much of your own. \* \* \* \* I thank you, My Dear Sir, for your kind enquiry as to my health, which, I am sorry to say, has been but very indifferent of late, and that I feel a very sensible decrease of strength and powers; so that it has become a very irksome task to write a few lines, or to give close attention to any subject requiring it; but perhaps it is as well as might be expected at the age of 80 from a constitution originally but very delicate.—Your solution of the prize question of this year is a correct and very neat one, and agrees very nearly with the manner and in the resulting numbers of the ingenious author.

\* \* \* \* \* Wishing you to give my respects to Mr. Turner, Mr. Bruce, and Mr. Russel, when you happen to see them, I am, with much esteem, Dear Sir, Yours very truly, CHAS. HUTTON.”

Throughout the time that Henry Atkinson was connected with the Literary and Philosophical Society, he was regarded as one of its most able and distinguished members. It has been stated that he was chosen one of the Committee in 1817: he continued to be invested with the same honour every successive year till the anniversary of



1828, when the delicate state of his health induced him to withdraw his name from those who were put in nomination. He continued also on the Committee of the Scientific and Mechanical Institution from its commencement till the anniversary preceding his decease.

From the high place he thus occupied in society, it may to some be a matter of surprise that he never attained a position superior to that of conducting a public school. From examination of man's history, there would seem to be bounds in his way through life that he cannot overpass; and this is more especially observable of those who, like Henry Atkinson, have no other source, save the occupation they pursue, to yield them the means of subsistence. In the next place, he loved his profession, and I have heard him say that had he his life to begin again, he would select no other calling than that of a teacher. He was most in his element when actively employed, from which we may infer he never looked upon "inglorious ease," as any means whatever of enjoyment. Lastly, he was a man of inflexible integrity. Noble by nature, he despised all measures of a fawning tendency, which often tell in high quarters, and not unfrequently bring the smiles of Fortune to those who can thus stoop for promotion. No man cherished the principles of honest independence more dearly; and, obeying this impulse, he made the fruit of his labour prove sufficient for all his wants.

Hitherto, I have spoken chiefly of Henry Atkinson in his professional capacity, and as he attracted public notice from the scientific papers he wrote, or by his solutions to questions proposed in the *Diaries*. He married, in 1822, Isabella, sister to Mr. Edward Riddle, already mentioned; and proved to be an affectionate, and excellent husband. When occupied with a subject of study, he set a due value on time, and on dismissing the school in the afternoon, he regularly resorted to his library, having in the winter period candles ready lighted awaiting him there. On accomplishing what he designed, he again mingled with his family, and few men entered with a keener relish into domestic enjoyment. Beloved by his wife, and strongly attached to his children, her attention, and the prattling playfulness shown by them, drew forth in ample measure the kindest feelings of his bosom.

Like other men who take a leading part in art or science, devoting themselves to enlighten their fellow beings, he met occasionally with opposition from those whose opinions differed from his own. When *Don Juan*, that varied and wonderful emanation of genius, came forth to the world, it was received into the Library of the Literary and Philosophical Society. Shortly afterwards, a cry began to arise about its immorality. They who had sensitive ears caught it



first, and on examination they found the echo corresponded with their own ideas. The first attempt, on their part, was to expel the book from the library. This was resolutely withstood by Henry Atkinson both on the ground of freedom of opinion, and right of membership. Although he disapproved of many passages in *Don Juan*, he showed most forcibly that on expulsion of the work, nearly all those who never dipped into poetry at all, would endeavour from curiosity to read it; besides, a motion of this kind, taken as a precedent, might endanger the welfare, and even the very existence of the Society. It was a subject well suited to his talents, and he handled it admirably. It caught the notice of Blackwood, who in his magazine twitted the *sternly pure* of Newcastle with their endeavours to throw *Don Juan* out of their immaculate library. Great excitement and much bad feeling prevailed on the occasion: at last the buzz died away; and when the poem appeared in Moore's edition of the noble Poet's Works, it passed the ordeal, without a single dissentient voice.

He occasionally contributed to the Newcastle Magazine, and amongst his last papers to the mathematical portion of that periodical, he unfortunately came into collision with a young aspirant to scientific fame, Mr. W. S. B. Woolhouse, whose talents and unrivalled industry have long ago placed him on the summit of that eminence, which so many young men of ability are toiling to ascend. The writer's limited knowledge of science prevents him from saying more than simply alluding to the occurrence, and he is even unable to say who occupied the best side of the question. It was a cause of deep regret to the friends of Henry Atkinson, whose health had then given way; for the difference was prolonged several months, and the exertion he underwent was succeeded by severe suffering. Mr. Woolhouse knew not of his illness, and he has since expressed his regret at exciting any unpleasant feelings in the mind of a man of genius, who was descending to the valley of the shadow of death.

For some years before his decease, the duties incumbent upon him augmented so much that he found it necessary to engage an assistant. The late Thomas Thompson, of this town, an able geometrician, filled the situation for a time, and rendered his employer much service in calculating data for the elaborate paper on Refraction. He was succeeded by John Riddle, of Woodburn, already mentioned, whose attachment to science was not more remarkable, than the gentle sweetness of his disposition. After him came his schoolfellow, Thos. Burn, to whom allusion has also been made, another most deserving young man, who conducted the school and attended to other duties, during the whole course of Mr. Atkinson's illness. It was delightful to see the familiarity with which he treated these youthful devotees of



knowledge, nor less pleasing was it to hear how high he stood in their estimation. Alas ! the uncertainty of life ! They have all passed away, and on looking abroad on the world, I know not where their fellows may be found !

To the very close of life, notwithstanding all his affliction, he was still cheerful, and had a welcome word to every visitor. When not suffering much pain, he loved company ; and expressed his delight to see any friend who had the power to vary, for a brief space, the current of his thoughts—for like all intellectual men he was ever thinking. When two or three were present, if glasses were produced, he drank neither spirits nor wine : a few drops of liquid from a small vial mixed with water, and a biscuit, were all he could take. Even then his conversation was jocund and lively, showing he retained full possession of his mental faculties. His disease had its seat in the lungs : he dated its commencement from the circumstance of taking, on the previous summer, a warm bath at Tynemouth, and returning home in the evening on the outside of a coach. Towards the close of 1828, his friends saw that the hand of Death was upon him, and on the end of January following, he departed this life, in the forty eighth year of his age. His remains were interred near the north west corner of Saint Andrew's Church-yard. Shortly afterwards, a tomb-stone was erected at the spot, bearing the following inscription :—

“In memory of HENRY ATKINSON ; an eminent Mathematician and successful Schoolmaster. His excellent natural talents, and extensive scientific attainments, are known and highly appreciated by the learned throughout Europe. In the intercourse of society his inflexible regard to truth, his general affability and benevolence, and his overflowing kindness of heart to his chosen and confidential friends, secured to him their highest respect and esteem. His Christian principles appeared in his general conduct through life, and during a long course of painful sickness, in his cheerful submission and humble confidence in God. He was born at Great Bavington, June 28, 1781, and died at Newcastle, January 31, 1829.”

In person Henry Atkinson was of an average height, but even more spare in frame than the generality of those who lead a sedentary life. He used a slight support to his right foot when he walked, although his movements shewed he possessed both vigour and agility. Having a fair skin, his complexion was pale, but the face was a good one, for the features, though somewhat thin, harmonized well with each other. His forehead was more high than broad, gently receding beneath locks of dark hair. On meeting him, what struck you most were his fine eyes of a hazel colour, remarkably brilliant, and lighting up a countenance, the prevailing expression of which, I would say, was gentle yet



dignified firmness. If you were intimate with him, on recognising you his look softened down, a smile played about his mouth, and this was succeeded by a word or two of winning, unaffected kindness. When I add that he wore black clothes and a white neckcloth, I have told nearly all I remember of his public appearance.

Few men ever carried the principles of science farther into the business of domestic life than Henry Atkinson. This he performed with so much ease and cordiality as to render it pleasing to behold him. In school, on teaching the boys to write, he not only pointed out to them how to shape and repair their pens, but shewed them likewise the proper method how to sharpen their pen knives. He published a set of round and small hand copy lines, which are now very scarce, and on the cover thereof he printed directions how to hold the pen, and other matters connected with writing, which are more to the purpose than any I ever saw. He himself excelled in penmanship: many specimens of his work in this line are preserved, and they are beautiful. When we consider how often he was unwell, and the small amount of time his vocation afforded him, either for employing his hand on this branch of art, or ascending the higher walks of information, it is wonderful how much he accomplished. I ought also to state that during such lapses of leisure as he enjoyed from public duty, he was so strictly honourable as never to say he was engaged when a friend or stranger waited upon him. This trait was in perfect keeping with his character: his adherence to truth, under all circumstances, was inviolably preserved.

It has been said that sometimes in discussing any casual subject, he had a spice of the pedant in his composition, and was more dictatorial than became the gentleman. I readily admit the charge is not altogether without foundation. This slight deviation from courtesy forms, however, no inconsistency in his character. Observant as he generally was of the rules of politeness, and much as he loved good fellowship, he was still a greater lover of truth; and it was only when his opponent, probably without knowing it, began to argue illogically that the other drew him back to firm ground. In the school, his remarks when levelled against wilful neglect of duty, were often severe: two or three words, sarcastically pointed, drew tears from any one of the softer portion of his pupils.

Taking his social qualities into consideration, I would say that in the presence of a few select friends, Henry Atkinson appeared to the greatest advantage. Altogether free from stiffness or formality, he glided imperceptibly into the spirit of discourse, and without assuming any undue portion thereof, he heightened its interest both by his sound practical sense, and extensive information. At one time he



was leader in a brilliant sally of thought ; at another he brought down to the comprehension of the youngest of the party some singular fact in philosophy, and illustrated the same in his own striking but familiar way. With almost every topic of conversation he was acquainted. He read with delight all our popular poets, while every distinguished work of fiction, published in this country, underwent his attentive perusal. In 1814, being in the late Mr. Charnley's shop, *Waverley* was lying on the counter, and by a single half hour's examination of that work, he declared its superior claim to public patronage. Hence, from his just discrimination of general excellence, to listen to his conversation was an intellectual treat of a high order. Those, especially who had a relish for knowledge, were sure to be gratified ; and I may be allowed to say, that of all the men I ever knew, Henry Atkinson, as an instructive friend, occupied a place second to none in my estimation. After his death, his library, consisting of nearly seven hundred volumes of valuable scientific and other standard works, was sold for the benefit of his widow and children.

Another lineament in his character I ought to observe, illustrative of his goodness of heart. Although his income was never great, he contributed regularly to the support of several aged individuals who were distantly related to his family ; and he performed this without the world knowing any thing of the matter. He did not regret it either, for previous to his death, he told his sister, Mrs. Hepple, that on reviewing his conduct through life, it afforded him the greatest satisfaction. I am glad to place this upon record, knowing that the acts of the generous and good are too often withheld from the notice of mankind.

Of the various branches of research which occupied his attention, that of the Refractive powers of the atmosphere was one probably best adapted to his genius, and on which he threw a flood of light sufficient to entitle him to the thanks of posterity. He seems to have been aware of this, for a short time before he died, it was a cause to him of regret that he would not likely be spared to complete the second and last paper he had planned on this subject. So near had he the design wrought out, that he considered if he could obtain an interview of about three hours with any good mathematician, he would put him in possession both of data and means by which it might be brought to a successful close. In this he was unfortunately disappointed, and the friends of learning were by his death deprived of much curious information on a department of science comparatively little known to the most profound philosophers of Europe.

Touching the views of religion entertained by Henry Atkinson, he was brought up a member of the Church of England, but sometime

after he removed to Newcastle, he became connected with the Unitarian Chapel in Hanover Square. The Rev. Wm. Turner, late pastor of the said congregation, was, through the long course of his ministry, remarkable as an amiable and intelligent man. Of rare worth, generous, and an advocate of all that adorns humanity, he drew around him a large circle of friends and admirers, noted alike for intellectual qualities, and love of learning. It may be expected that Henry Atkinson was likely to form one of the number: and again, the attachment arising from communion of minds similarly disposed, may account for his adherence to that body. Shortly before his decease, when a near relative was observing to him the passage from this world to the next was a dark one, he replied, "do you contemplate it as I have done, and you will not find it a dark one either." We rest in the hope that he was enabled to lay hold on the inheritance purchased by a Redeemer's blood, for those who by faith believe in His name.

It may interest the reader to know something of Henry Atkinson's family. His eldest daughter Elizabeth, a girl of great promise, died in 1836. His widow Isabella, who fondly cherishes his memory, with his daughter Mary Jane, and son Henry, who is employed in a respectable merchant's office, reside in the immediate neighbourhood of Newcastle. Since his death, his father Cuthbert, and mother Elizabeth, both died at Hawkwell. At the latter place, his only surviving sister, Mrs. Hepple, is still living, a clever and excellent woman, to whom he was deeply attached, and who justly regarded him as one of the best of men. It would seem that a genius for analytical investigation is inherent in the family, for another sister's son, Mr. Thomas Weddle, teacher in Mr. Bruce's academy, Newcastle, deservedly occupies as a mathematician the first place in the north of England. He is but a young man, and if his life be spared, the field he is now exploring will, it is hoped, yield him both emolument and fame.

In conclusion, the example afforded by Henry Atkinson ought to tell upon the conduct of every obscure individual who desires to advance his position in society. Indebted to no favour from either friend or fortune, he began to teach when a mere boy, and by good conduct and steady perseverance, from the time he reached manhood till that of his death, no instructor of youth, in Northumberland or the neighbouring counties, stood on higher ground. Still more his profession, laborious as it was, never exhausted his flow of energy: when the toil of the day was over, he turned to his studies with a resolution that proved his heart was there. His reward certainly was not wealth, but a sufficiency whereon to live, accompanied with the thrilling enjoyment experienced by all who cultivate intellect, and a tranquil consciousness of having, to the best of his power, developed those



faculties given him by his Maker above the brute creation. With a laudable aim in view, and a mind thus regulated, which to the owner is indeed "a kingdom," let no man, in battling with adverse circumstances, "bate a jot of heart or hope ; but still bear up and steer right onward." If his leisure minutes and half hours be frugally turned to account, either in acquiring knowledge, or in drawing from his own innumerable resources, he can form at the commencement but a faint idea of what, in the course of years, he may be able to achieve.



